



CITY OF HAYWARD
AGENDA REPORT

AGENDA DATE 06/08/99
AGENDA ITEM _____
WORK SESSION ITEM WS#3

TO: Mayor and City Council
FROM: Director of Public Works
SUBJECT: Harder Road Underpass Project Update

RECOMMENDATION:

It is recommended that Council review and provide comments on this report.

BACKGROUND:

The Harder Road Underpass Project is designed to eliminate the current at-grade crossing of the Union Pacific railroad tracks (see Exhibit A). When completed, the grade separation will eliminate potential collisions between trains and vehicles/pedestrians and improve traffic circulation on this vital east-west arterial. The project, which is funded primarily by State Grade Separation funds and Union Pacific Railroad funds, will lower Harder Road between Soto Road and Gading Road, so that traffic and pedestrians can pass safely underneath a new Union Pacific Railroad bridge without waiting for trains. The annoying train horn noises associated with the current at-grade crossing will also be eliminated.

Since the elevation of the railroad tracks does not change as a result of this project, Harder Road must be lowered by nearly 22 feet to pass below the tracks. The finished project will be similar in design to the underpass on Jackson Street west of Soto Road.

In order to construct the new four-span railroad bridge and lower Harder Road, a temporary railroad track will be constructed west of the existing tracks to carry trains during the construction period. An existing large drainage culvert will also be realigned as part of the project (see Exhibit B). After completion of the railroad bridge and transfer of railroad traffic to the new bridge, the temporary railroad track can be removed and excavation of the new roadway can be completed. The new grade separation will include two vehicle lanes and a bike lane in each direction, a median and a partially elevated sidewalk on the northerly side. Sycamore, Pear and Crepe Myrtle trees, shrubs and groundcover will be planted on the new sloping sides, median and parkway areas. Impacted residences and commercial buildings will be provided with new landscaped entrances and temporary parking where needed.

Because of the complexity of this project it will be necessary to close Harder Road between Soto Road and Gading Road for a period of about 20 months. When the project was originally

planned, it was expected that Harder Road would be closed during construction and that the temporary traffic impacts of the rerouted traffic, primarily onto Mission Boulevard, Jackson Street, and Soto Road, would be within an acceptable range. However, staff has recently reviewed the projected traffic impacts and now recommends that a temporary detour road be constructed to mitigate traffic diversions.

The originally planned closure of Harder Road at the UPRR tracks would temporarily obstruct the travel paths of approximately 1,000 morning and evening peak hour vehicles in each direction along the segment of Harder Road between Soto Road and Gading Road (see Exhibit A). It was anticipated that westbound vehicles using Harder Road would be diverted to either Mission Boulevard or Soto Road and eastbound vehicles would be diverted to either Jackson Street or Tennyson Road via Gading Road. Although the majority of the vehicles will likely choose Mission Boulevard or Jackson Street, it is reasonable to expect a substantial portion of the traffic would choose Soto Road, increasing Soto Road traffic between Harder Road and Jackson Street by about 50 percent. Although this was always a concern, recent studies show that the projected additional traffic on Soto Road from a Harder Road closure would result in unacceptable congestion. These studies also confirm what may be obvious to the driving public and that is that current Soto Road traffic has actually increased.

Staff now believes that the projected impacts along Soto Road warrant construction of a temporary detour road parallel to the closed section of Harder Road and across the UPRR tracks. Analysis of possible detour routes within the existing Harder Road right of way found that they were not financially feasible, because of construction phasing impacts, and because high retaining walls would be required between the detour road and the excavated undercrossing.

The best available detour road alignment, as shown on the attached Exhibit C, would be from Harder Road along Soto Road, Lund Avenue, across the UPRR tracks, across the corner of the Redgwick construction yard, and then back to Harder Road. Because Lund Avenue is presently unimproved along most of its length, staff proposes constructing curbs, gutters, and full width pavement to provide a safe, effective detour and to help mitigate the effect of the additional vehicles along this residential street of single-family homes, duplexes and apartments. It would also be necessary to acquire one permanent and two temporary roadway easements, as noted on the exhibit. A temporary traffic signal would be installed at the intersection of Lund Avenue and Soto Road to facilitate the turning movements.

In addition, staff has been aware of an increasing need for improvements at the intersections of Soto Road and Orchard Avenue and at Soto Road and Jackson Street to relieve the current and future traffic congestion. The need for these improvements will become more critical during the construction of Harder Road. Therefore, staff recommends that these minor street and traffic signal improvements be constructed either before, or concurrent with the Harder Road undercrossing. The recommended Soto Road and Orchard Avenue intersection improvement consists of adding a westbound right turn lane on Orchard Avenue, as shown on page 1 of Exhibit D. Four feet of right-of-way will need to be acquired from three property owners along the north side of Orchard Avenue. This work would most likely be combined with the

new project proposed to provide a sidewalk on the south side of Orchard Avenue and pavement overlay from Soto Road to Muir Street. The recommended Soto Road and Jackson Street intersection improvement consists of reconstructing the roadway divider along the north side of Jackson Street, which separates Jackson Street from Barnes Court, and adding a southbound right turn lane on Soto Road, as shown on page 2 of Exhibit D. This will also improve the alignment of Soto Road across Jackson Street and allow for a second exclusive northbound left turn lane on Soto Road.

PROJECT COST:

These various proposed changes substantially increase the costs for the Harder Road project, although the improvements to Lund Avenue and the Soto Road intersections are needed anyway. The following is a breakdown of these additional costs:

Soto/Jackson intersection	175,000
Soto/Orchard intersection	120,000
Lund Avenue improvements	290,000
Temporary detour across UPRR	<u>540,000</u>
TOTAL	1,125,000

When added to the existing budget for the project, the total estimated project costs are as follows:

Construction	6,375,000
Design and Administration	670,000
Right-of-Way Acquisition	310,000
Inspection and Survey	<u>411,000</u>
TOTAL	7,773,000

FUNDING:

The draft Five-Year Capital Improvement Program budget contains a total of \$6,648,000 for the Harder Road Project, \$711,000 in the Gas Tax Fund and the remainder in the Street System Improvement Fund. Staff has identified several immediate sources for a portion of the additional funding. Specifically, interest being received from LAVMA which has been set aside in a separate traffic mitigation account, could be allocated to this project in the Street System Improvement Fund. In addition, recently deposited traffic mitigation funds totaling \$150,000 from the Bailey Ranch Development could also be allocated in this fund as a contribution to the Soto Road intersection improvements. The City has received an application for a general plan revision and subdivision to allow 75 single-family homes at the end of Orchard Avenue. If the project is approved, staff is recommending that Greystone Homes provide \$120,000 to mitigate their share of traffic impacts at both the Soto Road/Orchard Avenue and the Soto Road/Jackson Street intersection. These funds could be allocated in the

Measure B Fund and combined with the other new Orchard Avenue Project. Total funding sources are shown below:

LAVMA traffic fund interest	205,000
Bailey Ranch traffic mitigation funds	150,000
Greystone Homes Development	<u>120,000</u>
Total	475,000

An additional \$650,000 in funding would be required based on present estimates. Some of this funding could come from existing fund balance in the Street System Improvement Fund. In addition, these estimated will be further refined as the design revisions are completed. Prior to advertising, staff will be in a better position to address the remaining funding requirement and will be able to recommend to Council a funding source.

SCHEDULE:

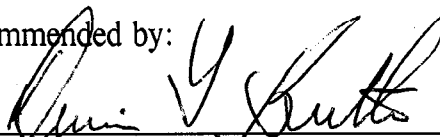
Based on the need for additional design and right-of-way acquisition, the construction of this project will be delayed from earlier projections. However, since additional funding will be needed, the revised schedule does permit bidding in early spring when the City has usually received very competitive bids. The proposed schedule is as follows:

Advertise	February 2000
Award	April 2000
Construction Complete	March 2002

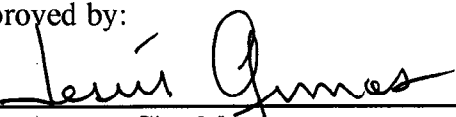
Prepared by:


Robert A. Bauman, Deputy Director of Public Works

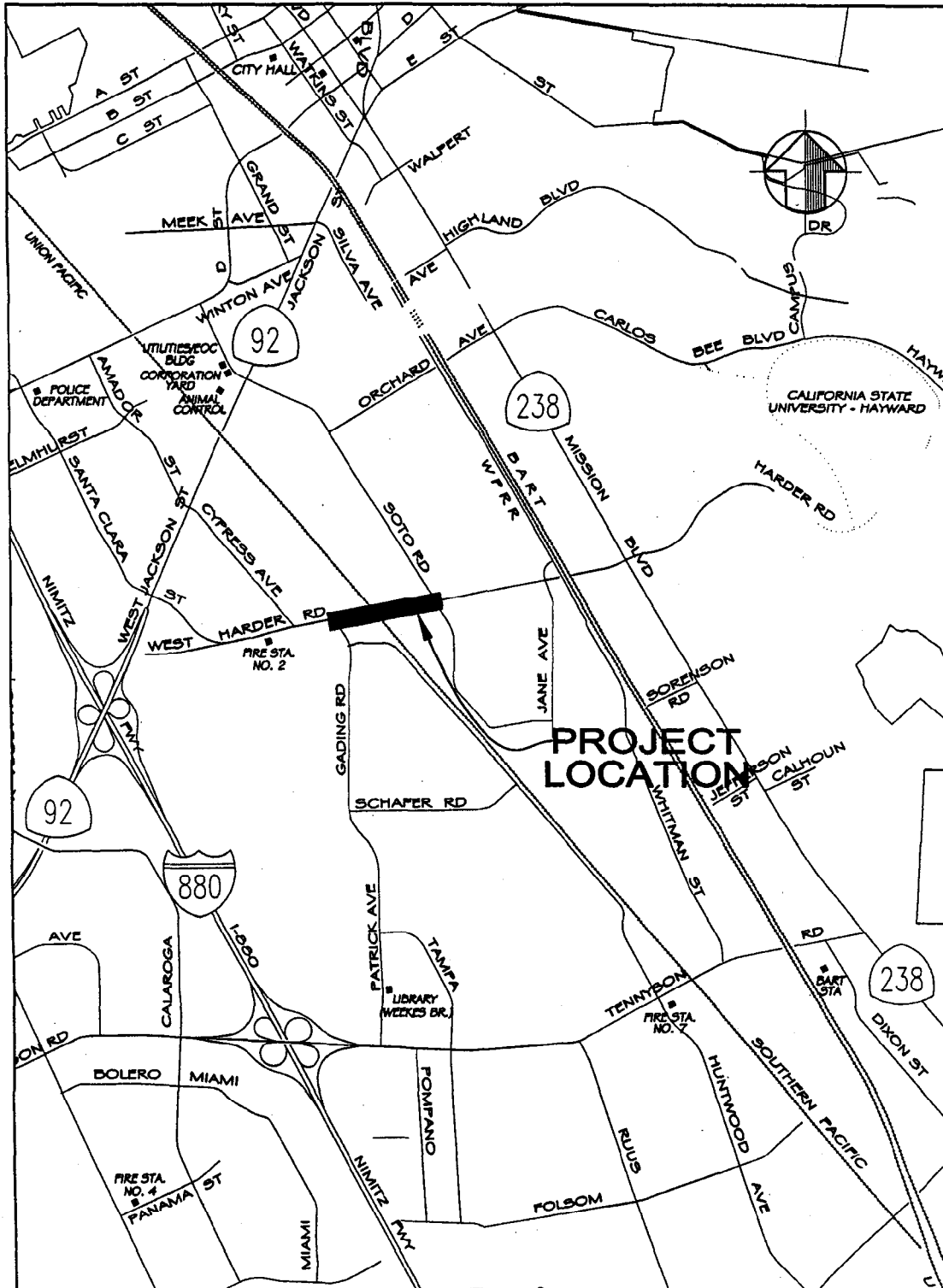
Recommended by:


Dennis L. Butler, Director of Public Works

Approved by:

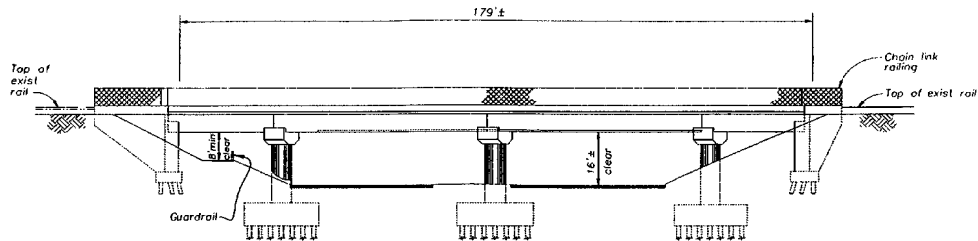

Jesús Armas, City Manager

Attachments: Exhibit A: Location Map
Exhibit B: Site Plan
Exhibit C: Detour Plan
Exhibit D: Intersection Improvements

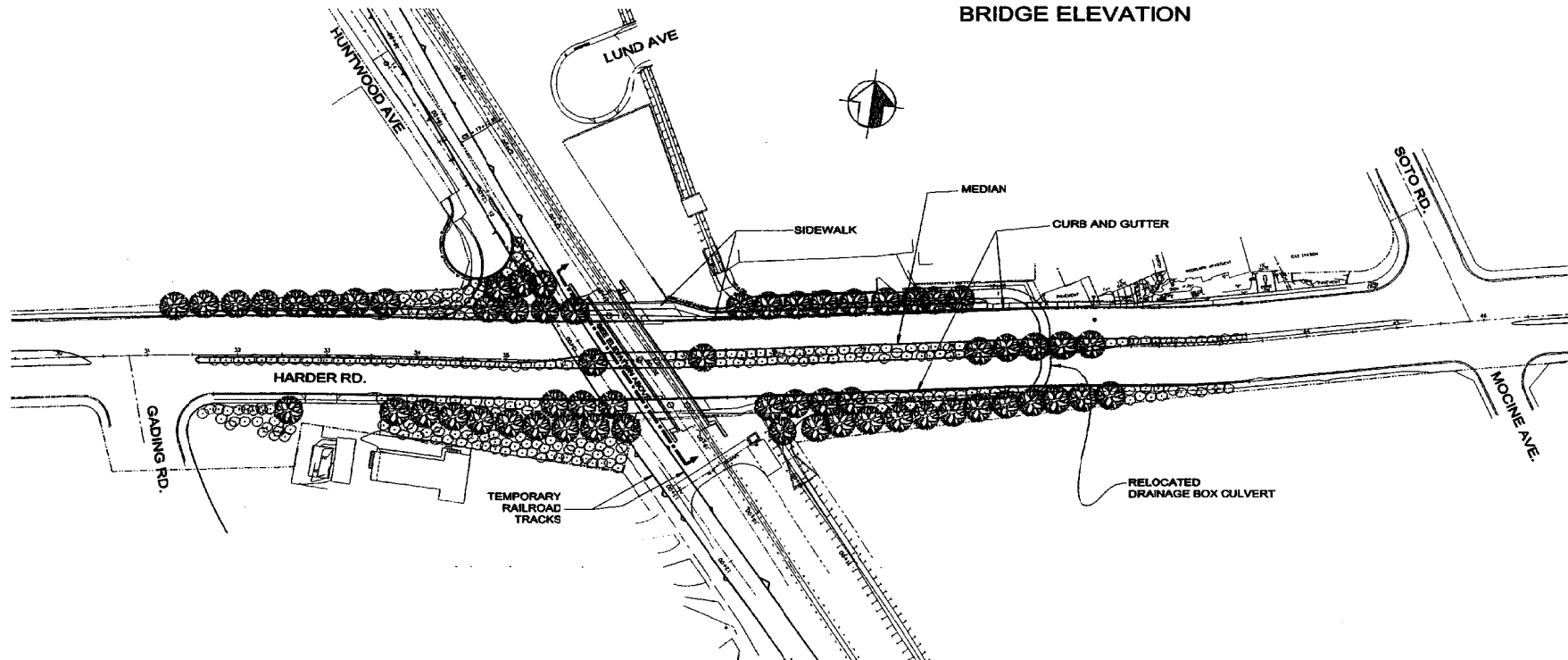


**HARDER ROAD UNDERPASS
LOCATION MAP**

EXHIBIT A



BRIDGE ELEVATION

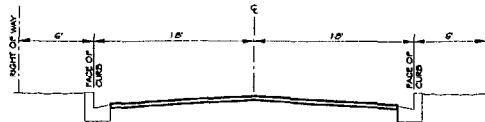


HARDER ROAD UNDERPASS PROJECT
SITE PLAN

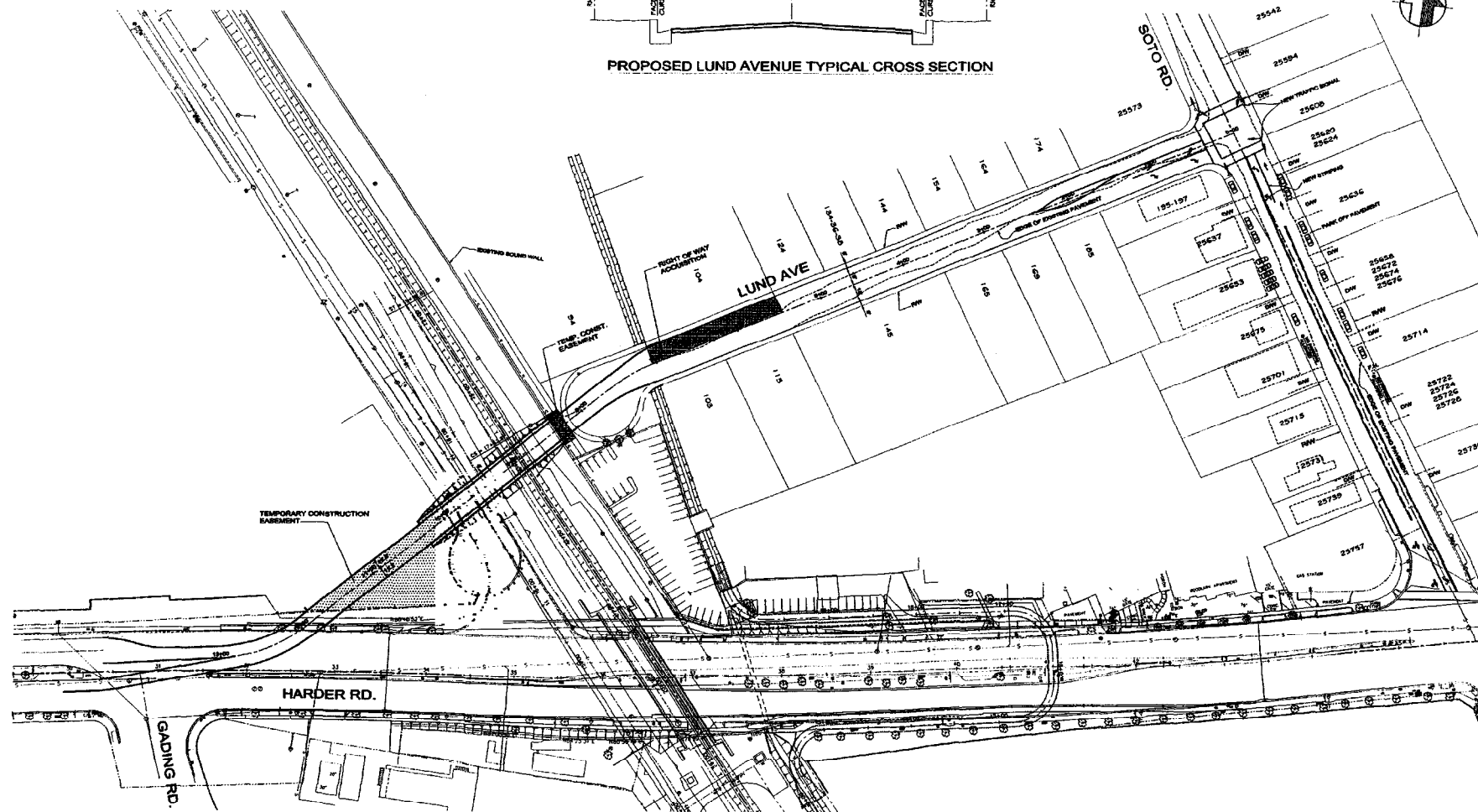
EXHIBIT B



CITY OF HAYWARD
DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRANSPORTATION DIVISION



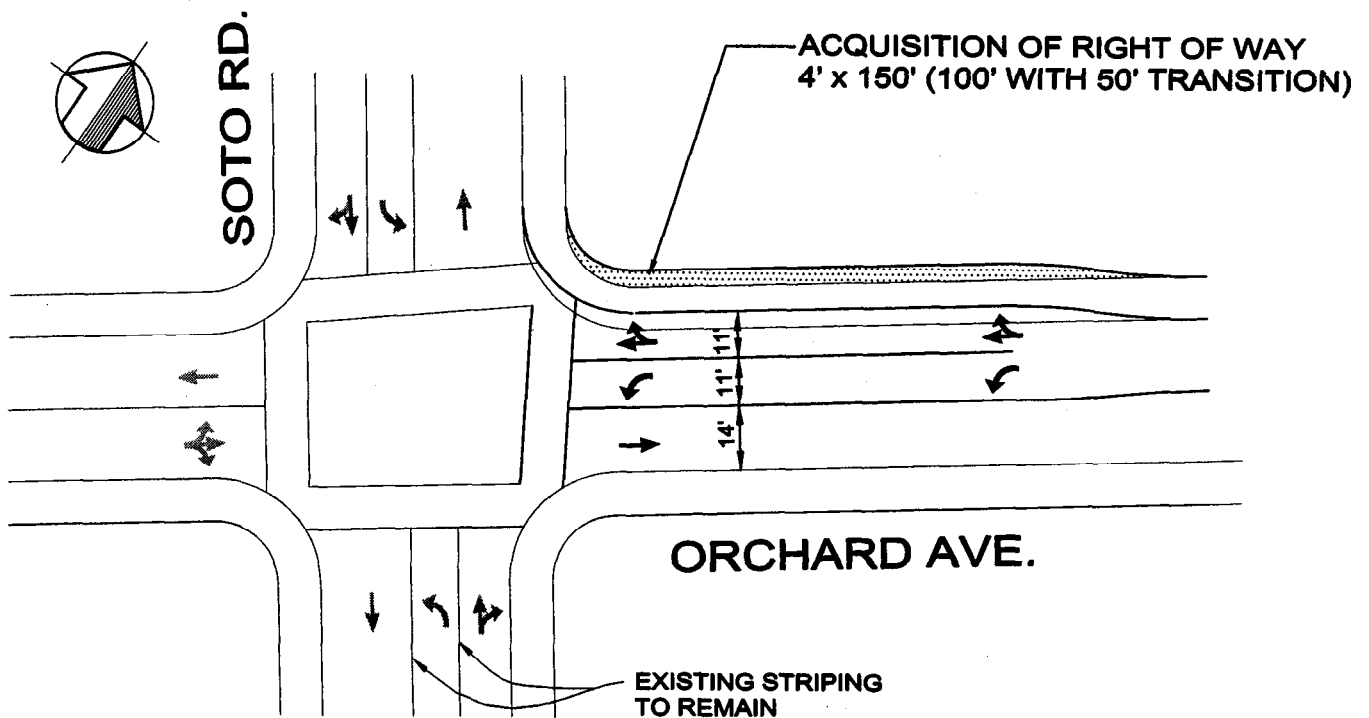
PROPOSED LUND AVENUE TYPICAL CROSS SECTION



HARDER ROAD PROJECT PROPOSED DETOUR
SCALE 1" = 50'

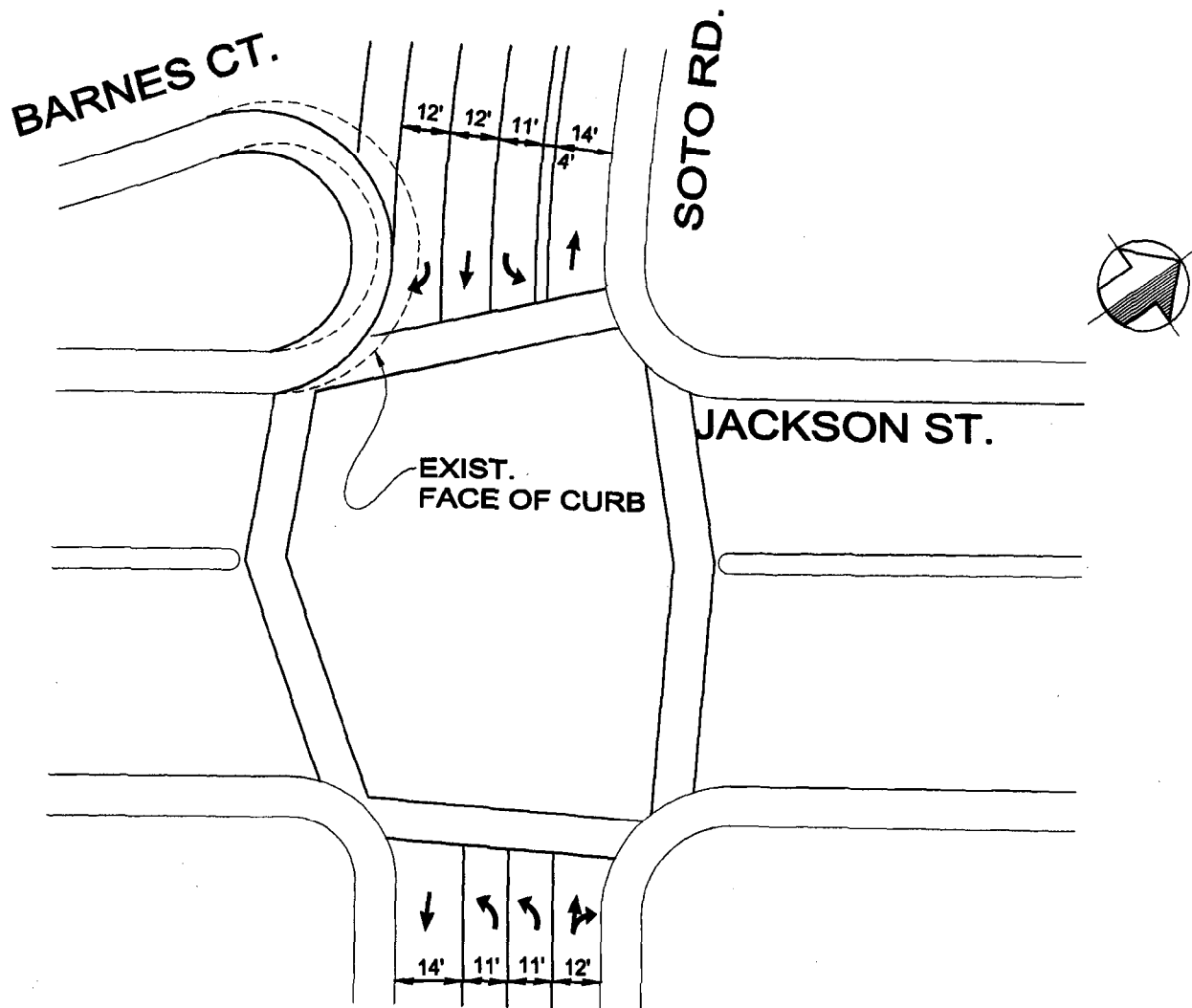
CITY OF HAYWARD DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING PROJECT NO. 3197 SHEET NO. 1		HARDER ROAD UNDERPASS PROPOSED DETOUR	
DATE: MAY 1999	SCALE: AS SHOWN	PREPARED BY: [] CHECKED BY: [] DESIGNED BY: [] DRAWN BY: []	

EXHIBIT C



**SOTO RD. AT ORCHARD AVE.
PROPOSED INTERSECTION STRIPING/WIDENING**

EXHIBIT D



SOTO RD. AT JACKSON ST. PROPOSED INTERSECTION STRIPING

EXHIBIT D

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